

# Hydrogen Gas Sensor Market - Forecasts from 2019 to 2024

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## Abstracts

The hydrogen gas sensor market is estimated to be valued at US\$607.052 million in 2018 and is estimated to grow at a CAGR of 4.13%, to reach US\$773.724 million by 2024. Hydrogen is regarded as one of the best clean energy carriers, which is the ultimate fossil fuel candidate, with a high heat of combustion, low minimum ignition energy, and wide flammable range as well as high burning velocity. It is used in metal smelting, glassmaking, semiconductor processing, petroleum extraction, and the daily chemical industry, etc. due to its strong reducing properties. In addition, hydrogen can also be applied in biomedical, environmental protection and seismic surveillance area such as for indicating certain type of bacterial infection, detection of environmental pollution. Hydrogen is not toxic but it is extremely flammable, and high concentrations of the gas in confined spaces will displace oxygen. Therefore, it is imperative to ensure that there is no leakage of hydrogen which will pave the way for its optimal utility.

Hydrogen sensors are used to detect hydrogen wherever it is produced, stored, distributed or used. There is a rapidly growing number of hydrogen sensors available on the commercial market. Different types of sensors exist and the most commonly available hydrogen sensors include catalytic, electrochemical, metal oxide semiconductors and thermal conductivity sensors. Each type of hydrogen sensor has its own advantages and disadvantages in terms of performance.

The hydrogen gas sensor market has grown significantly in North America. The U.S. Department of Energy's Fuel Cell Technologies Office is supporting the development and deployment of hydrogen as an alternative energy source in the United States. The Fuel Cell Technologies Office supports the department of energy's mission to ensure the United States' security and prosperity by addressing energy and environmental challenges through transformative science and technology solutions. The use of

hydrogen as a fuel has already been established in commercial markets, including stationary power systems and fuel-cell-powered industrial trucks. The growth of these markets is driving the development of hydrogen infrastructure, including transport and production capability, on-site storage, and on-site dispensers in the region.

The hydrogen gas sensor market is segmented on the basis of technology, end-user industry, and geography. Based on technology, the market is segmented into electrochemical, metal oxide semiconductors, catalytic, and others. Furthermore, the market is categorized on the basis of end-user industry which includes automotive, oil and gas, healthcare, aerospace and defense, and others. Further, the market is analyzed based on five regions, namely, North America, Europe, Asia-Pacific, Middle East and Africa, and South America.

The hydrogen gas sensor market is competitive owing to the presence of well-diversified international, regional and local players. However, some big international players dominate the market share owing to their brand image and market reach. The high market growth and favorable government policies are further attracting more players in the market while enhancing competitive rivalry. The competitive landscape details strategies, products, and investments being done by key players in different technologies and companies to boost their market presence.

#### Segmentation:

##### By Technology

Electrochemical

Metal Oxide Semiconductor

Catalytic

Others

##### By End-User Industry

Automotive

Oil and Gas

Healthcare

Aerospace and Defense

Others

By Geography

North America

USA

Canada

Mexico

South America

Brazil

Argentina

Others

Europe

Germany

France

United Kingdom

Others

Middle East and Africa

Saudi Arabia

Israel

Others

Asia Pacific

China

Japan

India

South Korea

Others

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9.8. Zhengzhou Winsen Electronics Technology Co., Ltd.

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